Trend Study 4-3-01

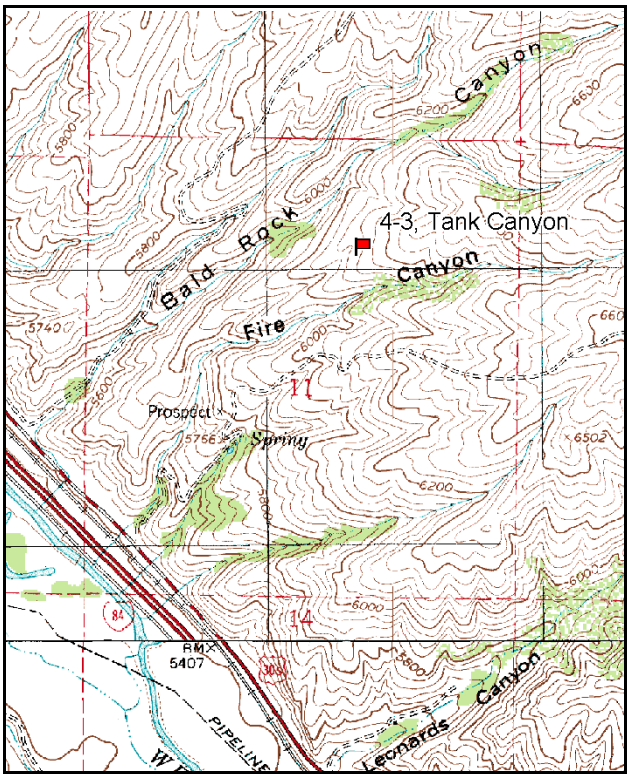
Study site name: Tank Canyon . Vegetation type: Big Sagebrush-Grass .

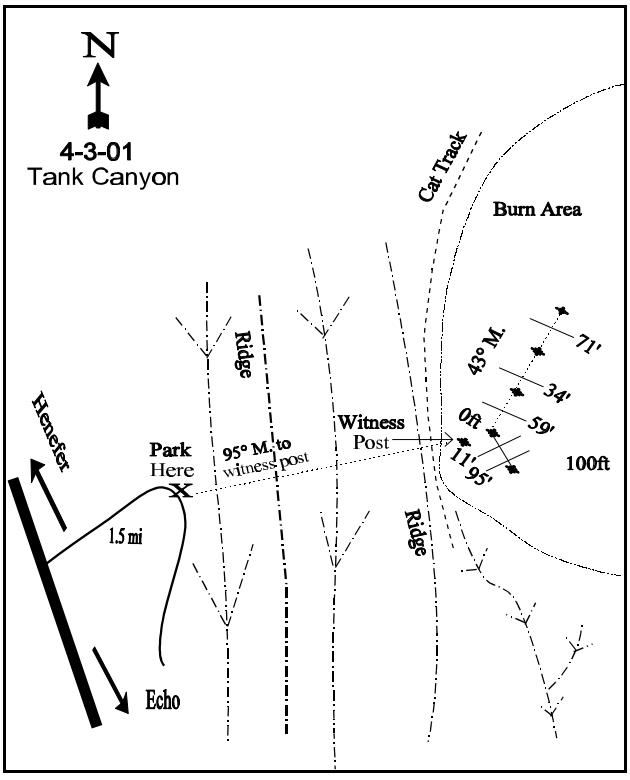
Compass bearing: frequency baseline 146 degrees magnetic.

Frequency belt placement: Line 1 (11 & 95ft), line 2 (59ft), line 3 (34ft), line 4 (71ft).

LOCATION DESCRIPTION

From the East Henefer Exit, travel east parallel to the freeway. Proceed 1.5 miles to the Fire Canyon Access road to a point where the road switchbacks. Park here and walk up a ridge, down the other side and up the next ridge to an open area that has been burned. A witness post is in the opening. The 0-foot baseline stake is just north of the witness post. The 0-foot baseline stake is marked with browse tag #7944. Line 1 runs at a bearing of 146 degrees magnetic. The rest of the baseline runs off the 0-foot baseline in a direction of 43 degrees magnetic.





Map Name: Henefer Diagrammatic Sketch

Township 3N , Range 4E , Section 11 UTM 4540050 N 461327 E

DISCUSSION

Trend Study No. 4-3

The Tank Canyon trend study samples critical deer winter range on the Henefer-Echo wildlife management area between Tank Canyon and Bald Rock Canyon. The study is on a 30% west facing slope at 6,160 feet elevation. The range type is an extension or pocket of mountain big sagebrush/grass which is closely bordered by an extensive burn from a 1982 fire. Another small fire burned the area some time between 1984 and 1990. The original frequency baseline and one density plot were burned while the other two density plots remained in the sagebrush. The site was read in 1990 with no change to the layout making the frequency data totally different from the density data. During the 1996 reading, the stakes were moved into the burned area. Deer used the area fairly heavily in 1984. Pellet groups were abundant and several winter-killed carcasses were seen in the immediate vicinity during that reading. Pellet group quadrat frequencies were low for deer and elk in 1996, but some sheep apparently used the area during the summer. A pellet transect read on the site in 2001, estimated 46 elk and 21 deer days use/acre (112 edu/ha and 51 ddu/ha). Most of the deer pellet groups appeared to be from spring use. About half of the elk pellet groups were from spring use and the other half were from winter use.

Soil should be similar to that described for Echo Canyon 4-2, insofar as drainage, parent material, depth, and available water capacity are concerned. One major difference is that this site contains markedly fewer large cobblestones and may be slightly less gravelly in texture. Soil texture is a clay loam with a neutral soil reaction (pH of 7.0). Effective rooting depth is estimated at just over 16 inches with a moderate soil temperature of 64°F at 16 inches in depth. Phosphorus is marginal at only 9.8 ppm, where values less than 10 ppm have been shown to limit plant growth and development. Soil erosion is minimal due to the abundant herbaceous cover. The erosion condition class was determined to be stable in 2001.

Prior to the burn between 1984 and 1990, the browse composition consisted primarily of mountain big sagebrush, with lesser amounts of stickyleaf low rabbitbrush, mountain snowberry, and Saskatoon serviceberry. Long-term utilization of big sagebrush appeared at that time to be moderate. Utilization during the winter of 1983-84 was relatively light because deep crusted snow cover remained for most of the winter, which gave all but the tallest browse a temporary rest from use. Population density of mountain big sagebrush was estimated at 9,865 plants/acre in 1984. The mountain big sagebrush population was vigorous and fully capable of maintaining itself. After 1984, a small fire of approximately 40 acres burned the slope. One of the three original density plots was burned along with the frequency baseline. As a result, density of mountain big sagebrush declined to 4,599 plants/acre in 1990. Utilization was light to moderate. During the 1996 reading, the baseline was lengthened and placed inside of the burned area. This resulted in the density of sagebrush declining to only 220 plants/acre. Utilization of these shrubs was light. Density declined further in 2001, to only 120 lightly browsed plants/acre. Half of the population consists of young plants.

The most numerous shrub on the site is stickyleaf low rabbitbrush which had a density of 3,500 plants/acre in 1996. This rabbitbrush declined to 1,900 plants/acre in 2001. Density was extremely high in 1990, due in part to a large number of young plants (3,000 plants/acre). The current population appears stable, mostly mature, and mostly unutilized.

Grasses and forbs were rare prior to the burn. The small burned area was seeded prior to the 1990 reading. Sum of nested frequency for perennial grasses tripled as a result. Seeded alfalfa and small burnet were also abundant. The two most numerous grasses consisted of bulbous bluegrass and crested wheatgrass. Intermediate wheatgrass and smooth brome were also seeded. By 1996, sum of nested frequency for perennial grasses increased slightly, while frequency of perennial forbs doubled. Crested wheatgrass and bulbous bluegrass increased significantly in nested frequency. Alfalfa also increased significantly in nested frequency

with small burnet declined significantly. During the 2001 reading, crested wheatgrass again increased significantly in nested frequency. Bulbous bluegrass also increased significantly. Alfalfa is still the dominant forb. It provided 87% of the forb cover in 1996 and 2001.

1984 APPARENT TREND ASSESSMENT

This study area appears to have stable soil and vegetation trends. No serious erosion is apparent and the current plant community should persist unless some outside disturbance occurs.

1990 TREND ASSESSMENT

This site has burned since 1984. The 1990 data will provide baseline data on successional changes following the fire. Currently, bulbous bluegrass, crested wheatgrass, intermediate wheatgrass, and smooth brome dominate. Seeded alfalfa is also abundant within the burned area. Herbaceous vegetation is very limited in the dense, unburned sagebrush stand where sagebrush canopy cover averages 16%. Sagebrush was completely eliminated within the burned area, but a few seedlings have already become established on the site.

TREND ASSESSMENT
soil - stable (3)
browse - downward, 53% loss to fire (1)
herbaceous understory - upward, good establishment of seeded species (5)

1996 TREND ASSESSMENT

The soil trend is up due to a decline in percent bare ground from 23% to only 2%. Litter cover has also increased by 30% with no noticeable erosion. Trend for browse is down when compared to the unburned area adjacent to the site. During the 1990 reading, two of the three density plots occurred outside of the burn. In 1996, the base line was lengthened and placed completely inside of the burn. As a result, the density of sagebrush dropped from 4,599 plants/acre to only 220. Trend for browse inside of the burn is considered stable. No seedlings were encountered, but young plants account for 36% of the population. In addition, use is light and vigor good. Trend for the herbaceous understory is up slightly. Sum of nested frequency for perennial grasses and forbs has increased, including a significant increase in the nested frequency of crested wheatgrass, bulbous bluegrass, smooth brome, and alfalfa.

TREND ASSESSMENT
soil - up (5)
browse - stable (3)
herbaceous understory - slightly up (4)

2001 TREND ASSESSMENT

Trend for soil is stable. Percent cover of bare ground has increased slightly and litter cover has declined 45%. However, herbaceous cover increased from 50% to 76% making for ample protective cover to help prevent erosion. Density of mountain big sagebrush has declined slightly to 120 plants/acre, but half of the population consists of young plants. Density of serviceberry has increased from 60 plants/acre in 1996 to 220 plants/acre. The most abundant shrub on the site is still stickyleaf low rabbitbrush which currently provides nearly half of the shrub cover. While being the most abundant shrub, it's density has declined 46% since 1996. Taking all of these factors into account, trend for browse is considered stable but still depleted. Trend for the herbaceous understory is up slightly. Sum of nested frequency of perennial grasses has increased

slightly including a significant increase in the nested frequency of crested wheatgrass and bulbous bluegrass. Total grass cover has also increased from 36% in 1996, to 58% in 2001. Sum of nested frequency for perennial forbs has declined slightly but alfalfa, which accounts for nearly 90% of the forb cover, has remained stable. Utilization of grasses and forbs was light in 2001.

TREND ASSESSMENT
soil - stable (3)
browse - stable but depleted (3)
herbaceous understory - slightly up (4)

HERBACEOUS TRENDS --
Herd unit 04 , Study no: 3

Type	Species	Nested Frequency				Quadrat Frequency				Average Cover %	
		'84	'90	'96	'01	'84	'90	'96	'01	'96	'01
G	Agropyron cristatum	a2	b231	c275	d322	2	83	89	98	14.40	28.78
G	Agropyron dasystachyum	a-	a-	b12	a-	-	-	6	-	.10	-
G	Agropyron intermedium	a-	c96	c56	b70	-	48	23	25	.77	2.92
G	Agropyron spicatum	15	3	15	4	7	1	5	2	1.08	.18
G	Bromus inermis	-	50	52	20	-	27	23	8	.70	.38
G	Bromus japonicus (a)	-	-	3	-	-	-	1	-	.00	-
G	Bromus tectorum (a)	-	-	b15	a1	-	-	8	1	.21	.00
G	Festuca ovina	-	-	3	3	-	-	2	1	.18	.00
G	Oryzopsis hymenoides	1	-	-	-	1	-	-	-	-	-
G	Poa bulbosa	a-	b228	c287	d358	-	83	81	100	18.70	24.53
G	Poa fendleriana	-	1	-	-	-	1	-	-	-	-
G	Poa pratensis	b12	a-	a-	a-	7	-	-	-	-	-
G	Poa secunda	d253	c58	a-	b18	96	25	-	9	-	.81
G	Sitanion hystrix	-	-	1	1	-	-	1	1	.00	.00
Total for Annual Grasses		0	0	18	1	0	0	9	1	0.21	0.00
Total for Perennial Grasses		283	667	701	796	113	268	230	244	35.96	57.62
Total for Grasses		283	667	719	797	113	268	239	245	36.18	57.62
F	Achillea millefolium	3	-	-	-	1	-	-	-	-	-
F	Alyssum alyssoides (a)	-	-	69	52	-	-	27	26	.26	.18
F	Astragalus spp.	B13	a1	a-	a-	8	1	-	-	-	-
F	Calochortus nuttallii	-	-	-	3	-	-	-	2	-	.01
F	Cirsium undulatum	-	-	2	4	-	-	1	2	.00	.30
F	Collomia linearis (a)	-	-	-	2	-	-	-	1	-	.00
F	Comandra pallida	-	-	1	-	-	-	1	-	.00	-
F	Collinsia parviflora (a)	-	-	-	2	-	-	-	1	-	.00
F	Cymopterus spp.	-	-	-	5	-	-	-	3	-	.04

Type	Species	Nested Frequency				Quadrat Frequency				Average Cover %	
		'84	'90	'96	'01	'84	'90	'96	'01	'96	'01
F	Descurainia pinnata (a)	-	-	-	1	-	-	-	1	-	.00
F	Erodium cicutarium (a)	-	-	-	7	-	-	-	4	-	.04
F	Eriogonum ovalifolium	-	-	3	-	-	-	1	-	.00	-
F	Lesquerella spp.	-	-	-	3	-	-	-	1	-	.00
F	Medicago sativa	$_{a}$-	$_{b}$123	$_{c}$169	$_{c}$183	-	47	70	75	11.81	16.42
F	Polygonum douglasii (a)	-	-	5	-	-	-	2	-	.01	-
F	Sanguisorba minor	$_{a}$-	$_{b}$24	$_{a}$9	$_{a}$5	-	13	4	2	.06	.18
F	Sisymbrium altissimum (a)	-	-	-	1	-	-	-	1	-	.00
F	Sphaeralcea coccinea	-	-	2	-	-	-	1	-	.03	-
F	Tragopogon dubius	$_{a}$-	$_{a}$5	$_{b}$23	$_{a}$7	-	3	14	3	.11	.09
F	Vicia americana	$_{a}$-	$_{a}$-	$_{c}$173	$_{b}$102	-	-	74	46	1.22	1.50
Total for Annual Forbs		0	0	74	65	0	0	29	34	0.26	0.24
Total for Perennial Forbs		16	153	382	312	9	64	166	134	13.26	18.55
Total for Forbs		16	153	456	377	9	64	195	168	13.53	18.80

Values with different subscript letters are significantly different at alpha = 0.10 (annuals excluded)

BROWSE TRENDS --
Herd unit 04 , Study no: 3

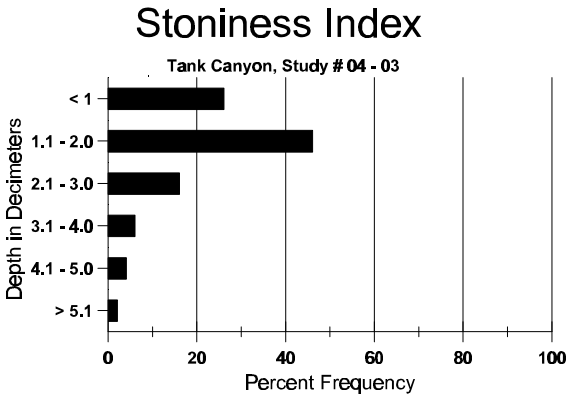
Type	Species	Strip Frequency		Average Cover %	
		'96	'01	'96	'01
B	Amelanchier alnifolia	3	1	-	-
B	Artemisia tridentata vaseyana	9	3	.68	1.13
B	Chrysothamnus nauseosus albicaulis	6	6	.48	.39
B	Chrysothamnus viscidiflorus viscidiflorus	66	38	3.00	1.44
B	Gutierrezia sarothrae	6	6	.01	-
Total for Browse		90	54	4.18	2.97

BASIC COVER --
Herd unit 04 , Study no: 3

Cover Type	Nested Frequency		Average Cover %			
	'96	'01	'84	'90	'96	'01
Vegetation	384	390	3.25	10.75	53.31	68.63
Rock	205	134	2.25	3.75	3.11	2.72
Pavement	185	225	11.75	18.25	1.29	3.76
Litter	400	345	73.25	44.50	63.50	34.77
Cryptogams	59	30	.25	0	.40	.58
Bare Ground	111	151	9.25	22.75	1.60	3.50

SOIL ANALYSIS DATA --
Herd Unit 04, Study no: 03, Tank Canyon

Effective rooting depth (in)	Temp °F (depth)	PH	%sand	%silt	%clay	%0M	PPM P	PPM K	dS/m
16.3	64.0 (16.0)	7.0	41.9	29.7	28.4	3.8	9.8	108.8	.6



PELLET GROUP FREQUENCY --
Herd unit 04 , Study no: 3

Type	Quadrat Frequency		Pellet Transect	
	'96	'01	Pellet Groups per Acre ⁄01	Days Use per Acre (ha) ⁄01
Sheep	26	-	-	-
Rabbit	-	6	26	N/A
Elk	9	15	592	46 (112)
Deer	11	12	270	21 (51)
Cattle	-	4	-	-

BROWSE CHARACTERISTICS --
Herd unit 04 , Study no: 3

AGE	YR	Form Class (No. of Plants) 1	2	3	4	5	6	7	8	9	Vigor Class 1	2	3	4	Plants Per Acre	Average (inches) Ht.	Cr.	Total
Amelanchier alnifolia																		
Y	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	90	-	-	-	1	-	-	-	-	-	1	-	-	-	66			1
	96	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	01	11	-	-	-	-	-	-	-	-	11	-	-	-	220			11
M	84	-	-	2	-	-	-	-	-	-	2	-	-	-	133	18	11	2
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	96	-	2	1	-	-	-	-	-	-	3	-	-	-	60	22	26	3
	01	-	-	-	-	-	-	-	-	-	-	-	-	-	0	14	20	0
D	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	90	1	-	-	1	-	-	-	-	-	1	-	-	1	133			2
	96	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	01	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0

% Plants Showing	Moderate Use	Heavy Use	Poor Vigor	%Change
'84	00%	100%	00%	+33%
'90	00%	00%	33%	-70%
'96	67%	33%	00%	+73%
'01	00%	00%	00%	

Total Plants/Acre (excluding Dead & Seedlings)				
'84	133	Dec:		0%
'90	199			67%
'96	60			0%
'01	220			0%

AGE	YR	Form Class (No. of Plants) 1	2	3	4	5	6	7	8	9	Vigor Class 1	2	3	4	Plants Per Acre	Average (inches) Ht.	Cr.	Total
Artemisia tridentata vaseyana																		
S	84	19	4	-	-	-	-	-	-	-	23	-	-	-	1533			23
	90	7	-	-	2	-	-	-	-	-	9	-	-	-	600			9
	96	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	01	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
Y	84	28	13	-	-	-	-	-	-	-	41	-	-	-	2733			41
	90	17	-	-	-	-	-	-	-	-	15	-	2	-	1133			17
	96	4	-	-	-	-	-	-	-	-	4	-	-	-	420			21
	01	-	-	1	2	-	-	-	-	-	3	-	-	-	1340			67
M	84	22	37	8	-	-	-	-	-	-	67	-	-	-	4466	28	32	67
	90	12	12	2	-	-	-	-	-	-	24	2	-	-	1733	26	34	26
	96	6	1	-	-	-	-	-	-	-	7	-	-	-	480	21	27	24
	01	-	-	1	2	-	-	-	-	-	3	-	-	-	1340	22	22	67
D	84	9	26	5	-	-	-	-	-	-	40	-	-	-	2666			40
	90	15	6	4	-	1	-	-	-	-	20	1	-	5	1733			26
	96	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	01	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
X	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	96	1	-	-	-	-	-	-	-	-	1	-	-	-	1960			98
	01	-	-	1	2	-	-	-	-	-	3	-	-	-	1340			67

% Plants Showing	Moderate Use	Heavy Use	Poor Vigor	%Change
'84	51%	09%	00%	-53%
'90	28%	09%	10%	-80%
'96	02%	00%	00%	+66%
'01	00%	01%	00%	

Total Plants/Acre (excluding Dead & Seedlings)				
	'84	9865	Dec:	27%
	'90	4599		38%
	'96	900		0%
	'01	2680		0%

AGE	YR	Form Class (No. of Plants) 1	2	3	4	5	6	7	8	9	Vigor Class 1	2	3	4	Plants Per Acre	Average (inches) Ht.	Cr.	Total
Chrysothamnus nauseosus albicaulis																		
Y	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	96	1	-	-	-	-	-	-	-	-	1	-	-	-	20			1
	01	1	-	-	-	-	-	-	-	-	1	-	-	-	20			1
M	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	96	5	-	-	-	-	-	-	-	-	5	-	-	-	100	24	36	5
	01	3	-	-	-	-	-	-	-	-	3	-	-	-	60	24	27	3
D	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	96	1	-	-	-	-	-	-	-	-	1	-	-	-	20			1
	01	3	-	-	-	-	-	-	-	-	3	-	-	-	60			3
X	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	96	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	01	-	-	-	-	-	-	-	-	-	-	-	-	-	40			2

% Plants Showing	Moderate Use	Heavy Use	Poor Vigor	%Change
'84	00%	00%	00%	
'90	00%	00%	00%	
'96	00%	00%	00%	+ 0%
'01	00%	00%	00%	

Total Plants/Acre (excluding Dead & Seedlings)				
	'84	0	Dec:	0%
	'90	0		0%
	'96	140		14%
	'01	140		43%

AGE	YR	Form Class (No. of Plants) 1	2	3	4	5	6	7	8	9	Vigor Class 1	2	3	4	Plants Per Acre	Average (inches) Ht.	Cr.	Total
Chrysothamnus viscidiflorus viscidiflorus																		
S	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	96	7	-	-	-	-	-	-	-	-	7	-	-	-	140			7
	01	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
Y	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	90	40	4	1	-	-	-	-	-	-	40	1	4	-	3000			45
	96	25	3	-	-	-	-	-	-	-	27	-	1	-	560			28
	01	6	-	-	-	-	-	-	-	-	6	-	-	-	120			6
M	84	31	-	-	-	-	-	-	-	-	31	-	-	-	2066	11	12	31
	90	32	20	14	3	-	-	2	-	-	62	-	9	-	4733	9	11	71
	96	101	42	-	-	-	-	-	-	-	141	-	2	-	2860	13	19	143
	01	84	-	-	-	-	-	-	-	-	82	2	-	-	1680	8	11	84
D	84	28	-	-	-	-	-	-	-	-	28	-	-	-	1866			28
	90	18	5	5	-	-	-	-	-	-	20	-	7	1	1866			28
	96	4	-	-	-	-	-	-	-	-	3	-	1	-	80			4
	01	5	-	-	-	-	-	-	-	-	4	-	-	1	100			5
X	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	96	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	01	-	-	-	-	-	-	-	-	-	-	-	-	-	60			3

% Plants Showing	Moderate Use	Heavy Use	Poor Vigor	%Change
'84	00%	00%	00%	+59%
'90	20%	14%	15%	-64%
'96	26%	00%	02%	-46%
'01	00%	00%	01%	

Total Plants/Acre (excluding Dead & Seedlings)				
	'84	3932	Dec:	47%
	'90	9599		19%
	'96	3500		2%
	'01	1900		5%

AGE	YR	Form Class (No. of Plants) 1	2	3	4	5	6	7	8	9	Vigor Class 1	2	3	4	Plants Per Acre	Average (inches) Ht.	Cr.	Total
Gutierrezia sarothrae																		
S	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	96	2	-	-	-	-	-	-	-	-	2	-	-	-	40			2
	01	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
Y	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	96	7	-	-	-	-	-	-	-	-	7	-	-	-	140			7
	01	1	-	-	-	-	-	-	-	-	1	-	-	-	20			1
M	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	96	4	-	-	-	-	-	-	-	-	4	-	-	-	80	7	10	4
	01	13	-	-	-	-	-	-	-	-	13	-	-	-	260	9	9	13

% Plants Showing	Moderate Use	Heavy Use	Poor Vigor	%Change
'84	00%	00%	00%	
'90	00%	00%	00%	
'96	00%	00%	00%	+21%
'01	00%	00%	00%	

Total Plants/Acre (excluding Dead & Seedlings)				
	'84	0	Dec:	-
	'90	0		-
	'96	220		-
	'01	280		-

Opuntia spp.																		
M	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	96	-	-	-	-	-	-	-	-	-	-	-	-	-	0	6	21	0
	01	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0

% Plants Showing	Moderate Use	Heavy Use	Poor Vigor	%Change
'84	00%	00%	00%	
'90	00%	00%	00%	
'96	00%	00%	00%	
'01	00%	00%	00%	

Total Plants/Acre (excluding Dead & Seedlings)				
	'84	0	Dec:	-
	'90	0		-
	'96	0		-
	'01	0		-

AGE	YR	Form Class (No. of Plants) 1	2	3	4	5	6	7	8	9	Vigor Class 1	2	3	4	Plants Per Acre	Average (inches) Ht.	Cr.	Total
Symphoricarpos oreophilus																		
Y	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	90	1	-	-	-	-	-	-	-	-	1	-	-	-	66			1
	96	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	01	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
M	84	1	-	-	-	-	-	-	-	-	1	-	-	-	66	22	13	1
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	96	-	-	-	-	-	-	-	-	-	-	-	-	-	0	18	45	0
	01	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0

% Plants Showing	Moderate Use	Heavy Use	Poor Vigor	%Change
'84	00%	00%	00%	+ 0%
'90	00%	00%	00%	
'96	00%	00%	00%	
'01	00%	00%	00%	

Total Plants/Acre (excluding Dead & Seedlings)				
	'84	66	Dec:	-
	'90	66		-
	'96	0		-
	'01	0		-